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CLIMATE CHANGE AUTHORITY SPECIAL REVIEW – “AUSTRALIA’S CLIMATE POLICY OPTIONS”

REPUTEX SUBMISSION

INTRODUCTION

CLIMATE CHANGE AUTHORITY POLICY REVIEW

RepuTex welcomes the opportunity to make a submission to the Climate Change Authority's Special Review on Australia's climate policy options.

With customers across over 150 high emitting companies, land-use, government and professional services firms, RepuTex is Australia's largest provider of energy and emissions market analysis. We have a depth of expertise in energy & climate policy and market analysis, utilising our proprietary models to help opinion leaders understand the economic and market impacts of policy design, while assisting businesses to analyse the impact of policy on cost and supply dynamics.

In framing our submission, we have sought to share our practical experience in modelling "real-world" abatement costs and supply dynamics. In analysing the real cost of abatement for market participants, we present analysis in terms of the cost and supply of Australian Carbon Credit Units (ACCUs), rather than the theoretical cost of abatement across the whole of economy.

We believe that this approach is critical to understand the real cost of action for market participants, which has been a failing of past policy design. Subsequently, we view abatement supply and cost analysis as the starting point for the design of environmentally successful, cost-effective policy.

Should you have any questions about this submission, please contact our research leads by email, or telephone via our Melbourne office on (03) 9600 0990.

Kind Regards,

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IN SHORT

CLIMATE CHANGE AUTHORITY POLICY REVIEW

- » Pricing mechanisms such as the Carbon Pricing Mechanism (CPM) and the Emissions Reduction Fund (ERF) has not served the market well thus far. While defined as 'market based' pricing systems, in reality, each scheme applied by the federal government of the day has failed to truly allow the market to set a 'carbon price' due to the structure of each scheme.
- » When considering new policy options, lawmakers must learn from past design faults in order to avoid compounding these mistakes. These include:
 - The "fixed price period" under the CPM was set too low to finance large-scale renewable energy transition, yet too high for emissions-intensive trade-exposed (EITE) industries
 - Inversely, within the ERF, a lack of transparency has led to a highly inefficient scheme.
- » Whether mandatory or voluntary carbon pricing policies are used, understanding the cost of abatement is the key to designing a cost-effective and environmentally successful scheme.
- » We believe this has been a weakness of policy design in the Australian market, where the myth of "expensive domestic abatement" has led to a desire to push down domestic prices (such as in the ERF), rather than tailor policy to support the development of numerous abatement sources at the same time.
- » Analysis of Australian offset supply, presented in [our March 2016 Carbon Market Update](#), "*Australia's "Low Cost" Abatement Opportunity*", discussed in this submission, reveals that there is in fact no shortage of low-cost emissions reduction supply in the Australian market.
- » Our analysis finds large abatement opportunities at two differing price points across "efficiency and waste" (less than \$5/t) and "agricultural and land-use" projects (\$10-20/t).
- » Subsequently, rather than focus solely on "absolute least cost", which squeezes out important projects in the rural economy, policy must take a longer-term view to target high value opportunities in the land sector, by designed a market structure that can achieve multiple objectives.

LEARNING FROM THE CPM

A MARKET PRICE & AVAILABILITY OF INFORMATION

Q2. What lessons can be learned from Australia and overseas on the effectiveness of mandatory carbon pricing, and its interaction with other climate policies?

- » While intended to be a 'market based' pricing system, in reality, the market price for carbon dioxide emissions under the former Carbon Price Mechanism was never discovered.
- » In the past, an absence of information on the cost of large-scale emissions reductions led policymakers to design a scheme which would allow the market to set a carbon price. While correct in theory, in Australian practice, this has yet to occur.
- » Following consultation with The Greens and balance of power independents, the CPM was designed to commence with a fixed price period in order to maximise environmental effectiveness and simplicity. At the time design, however, an appropriate market price was unknown.
 - The government picked a fixed price of A\$23/t based on the EU ETS carbon price in 2011
 - The price proved to be high enough to result in temporary fuel switching in electricity sector, but too low to finance new large-scale renewable energy plants to displace older coal-fired plants (high uncertainty about policy change was a compounding factor).
 - The carbon price alone was not enough to balance the higher marginal cost of new large-scale renewables investment, especially in the context of declining electricity demand. In isolation, carbon prices in excess of \$100/t may have been required before the marginal costs of a new plant would be lower than the marginal cost of an existing plant.
 - In parallel, EITE industries argued that the fixed carbon price was too high, despite a high number of free allowances being given to EITE emitters (reducing their effective cost per tonne to just 5.5% of the fixed carbon price).
- » The CPM was repealed before firms had an opportunity to set a 'market' price for emissions.
- » Should the floating price have come into effect, [analysis indicates that the local carbon price would likely have crashed](#) due to an oversupply of units and the use of Certified Emissions Reductions (CERs). Moreover, the linkage to the more dominant European ETS would have resulted in political control of the Australian carbon price resting in the hands of international policymakers (i.e. the United Nations and European Commission), while tying Australia to policy uncertainty in those markets.

LEARNING FROM THE ERF

A MARKET PRICE & AVAILABILITY OF INFORMATION

Q4. What lessons can be learned from Australia and overseas on the effectiveness of voluntary carbon pricing, and its interaction with other climate policies?

- » Similarly to the experience under the CPM, the ERF also attempts to apply a market-based pricing mechanism, however, low availability of information has prevented market pricing from working.
- » At the first ERF auction the Clean Energy Regulator purposefully disclosed no market information (e.g. abatement contracting target, benchmark price, spending cut-off, etc.) as it recommended participants 'simply bid at the lowest possible price' at which they could commence a project.
- » Subsequently, experienced-CFI market participants (i.e. the land and waste sectors) largely bid at the same ACCU prices they had received under the CPM (between \$13.90 and \$20.75), locking-in prices for pre-existing projects developed under the Carbon Farming Initiative (CFI).
- » At the second ERF auction contract pricing information was controlled, concentrating a massive advantage to a small number of large bidders. Subsequently, the second auction occurred within a narrow price band determined the largest bidders and best pricing information.
- » Despite narrow price band, the auction contracted a wide variety of projects. However, the Regulator's preference that participants bid at the 'lowest possible price' proved to be ineffective.
- » Given pay-as-bid contracts could not receive more than bid price, there was no reward for "winning" a contract that is bid at the project's real cost. Subsequently, many sophisticated proponents "bid-shaded" by inflating bids over cost, [with many contracts awarded at considerable margins above cost](#).
- » The pay-as-bid format therefore failed to distinguish between high/low/very low cost projects, leading to low cost projects being contracted while others were squeezed out. Moreover, future funding will be committed to largely 'non-additional' least cost abatement, with major new funds needed to contract 'additional' projects at the higher prices needed to support these projects. Subsequently, the ERF policy is limited in its ability to be scaled-up to meet larger emissions goals.
- » In addition, the mandatory, long-term nature of contracts (7-10 years) takes this ACCU supply off the market, effectively removing it from any other related mechanism, such as the safeguard scheme.
- » This places the government (ERF) in direct competition with any future market based scheme that may seek to incentivise businesses investment in ACCUs to lower their future liability.

COST IS KEY TO EFFECTIVE POLICY

UNDERSTANDING THE COST OF ABATEMENT

- » When mandatory or voluntary carbon pricing policies are applied, understanding the cost of abatement is a critical starting point to designing a cost-effective scheme.
- » As noted, relying on market pricing does not mean that abatement costs can be ignored.
- » Abatement costs become apparent, when market information is transparent. Policy should therefore be designed to discover - not suppress - the cost of abatement, and then be flexible enough to continue to unlock abatement in a cost effective way.
- » As we have learned in Australia:
 - Policies such as the ERF can encourage immediate, no-to very low- cost abatement.
 - However, focusing solely on absolute least-cost will squeeze out other important investments, particularly in critical longer term abatement measures.
 - Other policy, such as the CPM, can support long-term, permanent abatement through structural sectoral transformations.
 - However someone must pay for this investment.
- » Given the climate challenge is both large and long-term, policymakers may seek to use a combination of policies that are designed to unlock abatement at different price points.
- » As part of this design, attention must be paid to domestic abatement projects with a seemingly high upfront cost. These projects should be evaluated over the full timeframe over which a benefit occurs.
- » While Australia has set ambitious emissions reduction targets to 2030, a common assumption is that it is not possible - or too expensive - to rely on Australia's domestic market for these emissions cuts. As we examine in the following slides, we believe that this assumption is a myth, with very large volumes of abatement potentially available at a range of low costs.

AUSTRALIA'S ACCU OPPORTUNITY

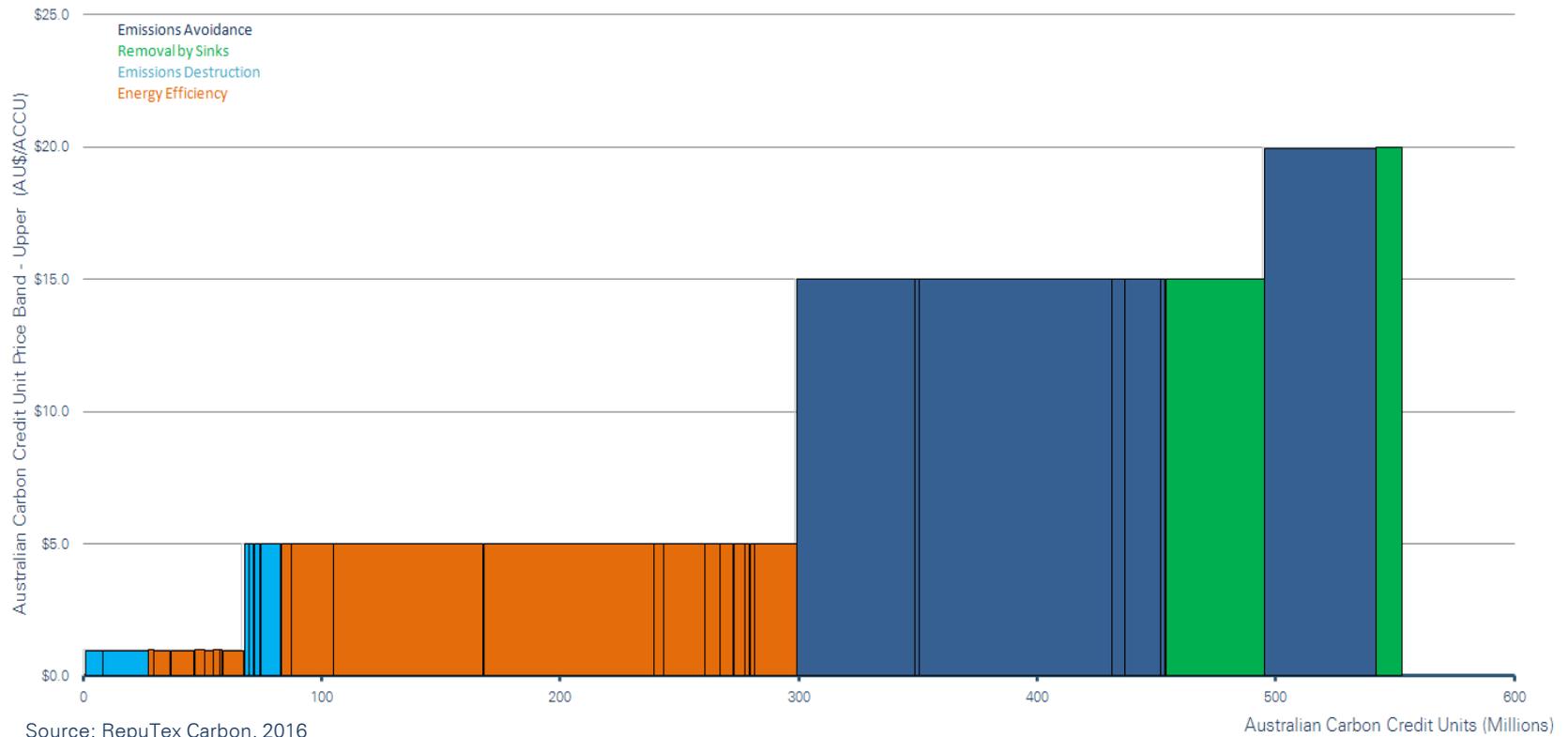
500 MILLION TONNES OF LOW COST DOMESTIC ACCUS

- » RepuTex has analysed the low-cost end of the ACCU supply curve to reveal an enormous opportunity for the supply of low-cost domestic ACCUs.
- » Since the inception of the ERF, new methodologies have rapidly expanded the number of no- to very low-cost ACCUs that could be generated domestically.
- » Analysis indicates that Australia has no shortage of domestic, low-cost emissions reduction credits
 - Existing ACCU-generating methodologies could bear more than 500 million ACCUs at low cost in over the next 7 years.
 - At prices < \$3, emissions destruction abatement, e.g. methane combustion, could generate up to 50 million ACCUs, making these the least cost offset type.
 - At prices < \$5, energy efficiency could produce more than 250 million ACCUs making this the largest source of very-low cost ACCUs.
 - At prices between \$11 – 17, low-cost emissions avoidance and removal by sink could return another 250 million ACCUs from the agricultural and land-use sectors.
- » These low-cost ACCUs may play a role in providing industry with access to a low-cost source of abatement, particularly in the early years of any compliance scheme.
- » Moreover, such a large volume of ACCU potential may displace the need to access international Certified Emission Reductions (CERs) credits that:
 - are being phased-out internationally after the Paris climate conference,
 - are largely non-additional,
 - do not support the low-carbon transition of the Australian economy; and
 - may create a competitive imbalance in any Australian market, as witnessed under the CPM.

AUSTRALIA'S LOW-COST SUPPLY CURVE

AUSTRALIA'S CUMULATIVE "LOW-COST" ACCU SUPPLY CURVE (2016-2022)

The below ACCU supply curve represents the cumulative number of low-cost ACCUs potentially available using existing methodologies over next 7 years, excluding those under already contract during ERF auctions I & II.



AUSTRALIA'S LOW-COST SUPPLY CURVE

DIFFERENT PRICE POINTS FOR ABATEMENT

- » Analysis clearly indicates at least two cost levels for ACCUs generated under current methodologies:
- » Agricultural and land-use sectors ACCUs generally necessitate prices of about \$10-20/t
 - Prices between \$11-17 would back the generation of more than 250m ACCUs in the next 7 years
 - Emissions avoidance has the potential to deliver around 200 million ACCUs
 - Sequestration has the potential to deliver around 60m ACCUs
 - This is reflected in the average contract prices we have seen so far under the ERF, where the land sector has been able to exploit their earlier methodology development to aggressively lock-in prices between \$11 and \$17/t over the next 10 years.
- » Building, industry, and waste sector ACCUs can be generated at prices below \$5/t
 - Very low prices of between \$0.40 and \$5 would still encourage the production of about 300 million ACCUs in the next 7 years
 - Energy efficiency has the potential to deliver around 260m ACCUs
 - Emissions destruction has the potential to deliver around 40m ACCUs
- » Although projects are not bidding at these very low price levels in ERF auctions, they represent the very low prices needed to cover the transaction costs of generating ACCUs for projects that are already likely to have a strong underlying business case based on alternative revenue streams or energy cost savings.
- » Therefore, attempting to incentivise more of these projects types with high financial reimbursements is inefficient because it attempts to overcome the real investment barriers through potential for higher and higher windfall profits.

IMPLICATIONS FOR POLICY DESIGN

FOCUSING SOLELY ON “LEAST COST” IS NOT EFFECTIVE

- » While “market forces” may be expected to pick absolute least cost ACCUs, in practice, this has two major flaws:
- » New carbon farming projects are no longer supported at very-low prices
 - Even the lowest-cost rural projects (e.g. dietary additives and regrowth) are squeezed out by no- and very low-cost projects within the industrial sector
 - The Agriculture and land-use sectors therefore lose their low-carbon pathway
 - Australia therefore loses out on hundreds of millions of tonnes of low-cost emissions reductions that do not occur without investment support
 - This would be less problematic if contracted abatement was additional, but, unfortunately, this is not always the case.
 - “Efficiency” projects typically pay for themselves through energy cost savings. Energy costs saving are both larger and more immediate than delayed and smaller abatement payments
 - Subsequently, projects are justified on their natural cost savings, rather than extra payments that are highly uncertain.
- » Total amount of emissions reductions required will require nothing short of a transformation of each major emitting sector
 - Therefore, the questions is not “which ACCUs are cheapest”, but “how to cost-effectively access a large number ACCUs at prices that support decarbonisation”

ONE UNIT, MULTIPLE MARKETS

DESIGNING A MARKET FOR MULTIPLE PURPOSES

Q12. What policies do you consider are best suited to which sectors and why?

- » Given the ERF has no underlying carbon liability, the policy provides no clear market demand signal.
- » As currently designed, least additional, or no-cost ACCUs are squeezing out other low-cost projects that are more economically and environmentally beneficial over the long-term. Future ERF contracts will therefore go to businesses investing in the least-additional projects.
- » In particular, carbon sequestration methods, such as environmental plantings, which represent long-term emission offsets, are discarded in favour of those with more immediate commercial benefit.
- » The presence of at least two price points in the “low-cost ACCU supply curve” implies that different abatement types may be utilised for different markets, in line with different policy objectives.
- » Given abatement costs are so different, it is inefficient to try and access them with a single price. Instead, differentiating low-cost ACCUs into categories would allow policy makers the opportunity to design more cost-effective policies.
- » For example, multiple policies – or multiple markets within the one scheme – may be designed to cover different aspects Australia’s economy, such as one market for domestic energy and another for internationally trade-exposed industries.
- » If ACCUs continue to be generated through existing methodologies, they should be differentiated into at least two categories, each with their own market.
 - E.g. Within an international ETS, the use of offsets such as CERs can be categorised to differentiate their date of origin and/or project type, which influences their eligibility
- » Energy efficiency and methane destruction projects are able to generate hundreds of millions of ACCUs at very low prices because Australia’s high energy prices ensure the energy savings achieved by these categories means little to no abatement price support is necessary to develop these projects. The ACCUs would have to be of some value to a market to justify their creation, however, and could be utilised to improve the emissions accountability of industry that cannot tolerate higher prices.

THE NEED FOR CERTAINTY

FILLING THE SHORT-TERM POLICY VOID

Q.13. Are there sectors that are better suited to voluntary pricing in the short term and mandatory policies in the longer term and why?

- » Critical to the design of future policy is for regulation to be supported by clear rhetoric and transparency in communications. This is able to ensure certainty in the market and confidence in the long-term function of the market.
- » In order to restore certainty in the Australian market, a policy change is not necessarily required.
- » Instead, current policy may be more clearly communicated to the market. For example, in international markets such as the EU ETS, eastern United States, California, New Zealand and China, the timeline for future compliance obligations was clearly communicated from the beginning of the scheme, providing market participants with certainty over the long-term direction of the market, even though the detail and design of subsequent market phases was set at a later point.
- » In theory, such an approach could be applied in Australia, whereby the government's Safeguard Mechanism – as currently designed – has the potential to be utilised as a “soft start” policy. In such an example, the flexibility provided to high emitting companies may remove the risk of initial compliance costs, while providing proponents and the Regulator with an opportunity to “learn by doing” ahead of the establishment of an effective market later.
- » This approach would be comparable to international markets, where policy was intentionally set with low compliance obligations to provide time to “learn by doing” ahead of the future scale-up of policy.
- » Should policy certainty be restored in Australia, potential remains for an ‘early market’ to be established based on voluntary emissions reduction activity undertaken by companies. However, as noted, such early action may occur in competition to other policy such as the Emissions Reduction Fund, which locks away supply from the broader market.
- » Policy amendments would therefore be required to ensure broader competition. For example, mandatory delivery contracts under the ERF may become a tradable put option for emission reductions, providing option holders with the right but not the obligation to sell future abatement at a set price.
- » This may support the transition of policy from government funded expenditure to the private sector, at prices lower than might otherwise be available. Moreover, a voluntary scheme may support a transition from voluntary pricing in the short term to mandatory polices in the longer term.

Q1. The Authority proposes assessing policies primarily on their cost effectiveness, environmental effectiveness and equity. Are these principles appropriate? Are there any other principles that should be applied, and if so, why?

CONCLUSION

PRINCIPLES OF FAIRNESS AND TRANSPARENCY

- » In applying the lessons learned from current and past domestic policy, “fairness” and “pricing transparency” should be key principles that are advanced when evaluating policy options
- » The enormous size of Australia’s decarbonisation challenge will require both private and public money to be allocated efficiently. We believe policy should therefore be designed to achieve emissions reductions across multiple activities at multiple price points, not just favour least cost.
- » For example, government purchasing may be directed towards projects that either result in long-term, structural emissions reductions or some have some other significant public benefit, such as large-scale environmental reforestation and renewable energy.
- » Private investment may be directed toward “low-cost” projects that focus on cost savings stemming initially from energy, but also later from emissions liability, or projects that have other mainly commercial benefits. Examples include carbon plantations and energy efficiency.
- » As we have learned from previous climate change policies, the advantages of market-based approaches are not realised unless a market is able to quickly identify the pricing that balances supply and demand.
- » This occurs more efficiently when information is freely available through a transparent process. Once underlying costs become apparent, policy should be reviewed to make it more cost-effective
- » Critically, Australia has low-cost abatement to support an interim transition to a more robust market setting that may be established after the 2017 policy review.
- » However, timing is critical, many high volume abatement projects, such as large-scale environmental reforestation, require support now in order to ensure supply is available after 2020.
- » Should low-cost domestic supply be utilised, this may have a range of co-benefits, including low costs for high emitting companies, and the displacing of any short-term need for CERs to be used in the domestic setting. This would subsequently ensure that control of local policy stays in the hands of Australian policymakers, while buying time for the Regulator to ‘learn by doing’ ahead of any more significant market linkage.

ABOUT REPUTEX

CLIMATE CHANGE AUTHORITY POLICY REVIEW

- » With customers across over 150 high emitting companies, land-use, government and professional services firms, Reputex is Australia's largest provider of energy and emissions market analysis.
- » Reputex has a depth of expertise in energy & climate policy and market analysis, utilising our proprietary models to help opinion leaders understand the economic and market impacts of policy design, while assisting businesses to analyse the impact of policy on cost and supply dynamics.
- » We work with a range of leading organisations, including:
 - High emitting firms: BP Energy, BHP-Billiton, CLP Holdings, Delta Electricity, Hong Kong Electric Holdings, Incitec Pivot, Marubeni Aluminium, Origin Energy, Santos Limited, Sino Land, Snowy Hydro, Stanwell Corporation, Treasury Wines, Wesfarmers, Woolworths (etc.)
 - Government departments and agencies: Climate Change Authority, Dept. Agriculture, Fisheries, Dept. Economic Development, Dept. Prime Minister and Cabinet, Dept. of Environment, Dept. Parliamentary Services, Dept. Primary Industries, Dept. Environment and Heritage (etc.)
 - Developers, services and associations: Bain & Company, Business Council of Australia, COzero, KordaMentha, Country Carbon, Devine Agribusiness, Energy Developments, Energy Supply Association, Greencollar, KPMG, Macquarie Bank, RE Group, Standard & Poor's (and more...)
- » Within these firms, we work with a diverse range of teams, from policymakers and government affairs, strategy and market analysts, through to portfolio managers, risk and corporate finance.
- » Reputex has offices in Melbourne and Hong Kong, supported by a team of analysts with backgrounds in economics, commodities, policy and energy markets. The company was the 2012 winner of the China Light and Power-Australia China Business Award for excellence across Australia-Pacific.

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